

Looking Back to Move Forward: Revisiting the Btu in Evaluating Current Policy Alternatives

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I. INTRODUCTION

The term “climate change” connotes an area of study to some, is used as a scare tactic by others, and is a reality to many. Estimates regarding the extent to which climate change is affecting our planet are subject to increasing scrutiny by a watchful public eye, due to the skepticism with which research regarding the impact of climate change has been made.¹ However, despite this skepticism, curbing the extent of climate change has become one of the most vital missions of our time.

The Department of Defense (DoD) explained in its Quadrennial Defense Review Report² that climate change will “shape the operating environment, roles, and missions” the DoD undertakes and have an impact on the department’s facilities and military capabilities.³ The DoD recognized that, although climate change does not directly cause conflict, it acts “as an accelerant of instability or conflict.”⁴ In this sense, although there is a theoretical debate raging regarding the impact of climate change, it is imperative for all members of the global community to work together to find a reasonable path to curb and reduce emissions, in order to mitigate and reverse the harmful effects of climate change.

The debate over climate change, its potential impact, and methods of mitigating and reversing it, is an international one. However, each nation-state must set its own framework of policies to properly address its internal sociopolitical and socioeconomic issues as they relate to climate change.

President Barack Obama ignited the current debate on climate change in the United States. In his inaugural address on January 20, 2009, President Obama declared that “each day brings further evidence that the ways we use energy strengthen our adversaries and threaten our planet.”⁵

1. Elisabeth Rosenthal, *U.N. Panel’s Glacier Warning Is Criticized as Exaggerated*, N.Y. TIMES, Jan. 19, 2010, at A8, available at <http://www.nytimes.com/2010/01/19/science/earth/19climate.html>. See also Timothy E. Wirth, C. Boyden Gray & John Podesta, *The Future of Energy Policy*, 82 FOREIGN AFF. 4, 135 (2003) (noting that “the only disagreement lies in how fast it is occurring and how much this [climate change] will affect the globe”). See also President Barack Obama, State of the Union Address (Jan. 27, 2010), available at <http://www.whitehouse.gov/the-press-office/remarks-president-state-union-address>. The President noted: “I know that there are those who disagree with the overwhelming scientific evidence on climate change.”

2. DEP’T OF DEF. QUADRENNIAL DEF. REVIEW, February 2010, available at http://www.defense.gov/qdr/images/QDR_as_of_12Feb10_1000.pdf. The Quadrennial Defense Review is a legislatively mandated review of the Department of Defense strategy and priorities.

3. *Id.* at 84–85.

4. *Id.*

5. President Barack Obama, Inaugural Address (Jan. 20, 2009), available at <http://www.whitehouse.gov/blog/2009/01/21/president-barack-obamas-inaugural-address>.

Immediately thereafter, the political landscape changed, such that climate change, and with it, energy policy, were brought to the fore.⁶

To evaluate the current policy alternatives, it is necessary to take a step back and revisit the Btu tax proposed by the Clinton Administration. Although seventeen years have passed since the Btu tax was proposed, and the U.S. is at war in theatres that are much different from those in which it was involved during the Clinton Administration, the landscape of the climate change debate has not changed dramatically. The lessons learned from the policies espoused by the Btu tax proposal may be critical in determining how to best approach climate change legislation today.

II. THE BTU TAX

A. *The Original Proposal*

In his 1993 State of the Union Address, President Clinton proposed the Btu tax, which was a broad-based energy tax.⁷ The purported rationale for the broad-based energy tax was “to provide us with revenue to lower the deficit because [the tax would] also combat[] pollution, promote[] energy efficiency, promote[] the [economic] independence of this country, as well as help[] to reduce the debt.”⁸

Under Clinton’s proposal, a tax would be imposed on the consumption of British thermal units (Btus) of energy.⁹ Thus, it was a “tax based on the heat content or heating potential of a fuel or energy content in the form of heat.”¹⁰ The proposal applied a 25.7 cents per million Btu tax to most fuels, including coal, natural gas, ethanol, and methanol.¹¹ For oil, a surcharge of 34.2 cents was added, bringing the tax on oil and oil

6. Wirth, *supra* note 1, at 135.

7. President William J. Clinton, State of the Union Address (Feb. 17, 1993) (transcript available at <http://www.c-span.org/Transcripts/SOTU-1993.aspx>).

8. *Id.*

9. CONG. BUDGET OFFICE, AN ANALYSIS OF THE PRESIDENT’S FEBRUARY BUDGETARY PROPOSALS 30 (1993). According to Dictionary.com, “A British Thermal Unit is the amount of heat required to raise the temperature of 1 lb. of water 1° F.”

10. Salvatore Lazzari, *Energy Tax Policy: An Economic Analysis*, CONG. RESEARCH SERVICE REPORT FOR CONGRESS, June 28, 2005, at CR-10. According to the CRS report, “one barrel of oil has, on average, about 5.8 million Btu’s, meaning that it has 5.8 million units of heat capable of raising one pound of water at maximum density by one degree Fahrenheit. One short ton of coal (2,000 lbs.) contains about 22 million Btu’s, about four times the Btu’s in one barrel of oil.

11. STAFF OF THE JOINT COMM. ON TAXATION, 103D CONG., SUMMARY OF THE PRESIDENT’S REVENUE, PROPOSALS 61 (1993).

derived fuels to 59.9 cents per million Btus.¹² The surcharge served two purposes—to promote conservation for national security reasons¹³ and to encourage the use of natural gas.¹⁴ The proposal also taxed nuclear power and hydropower based on the national average of Btus required to generate electricity from fossil fuels.¹⁵ Fuel from renewable resources, including solar, wind, geothermal, and biomass were excluded from the imposition of the tax.¹⁶ In addition, fuels used for feedstock were exempt from the Btu tax.¹⁷ The proposal was to be phased in ratably over three years and indexed to inflation after full implementation in 1997.¹⁸ The proposed collection point of the tax was to be as close to the source of the energy or as far “upstream” as possible, in order to minimize the administrative burden of the tax and influence choices upstream.¹⁹

The Congressional Budget Office (“CBO”) anticipated that the Btu tax rates would trigger an increase in the price of gasoline by 7.5 cents per gallon, home heating oil by 8.3 cents per gallon, natural gas by 26.5 cents per million cubic feet, and residential electricity by 0.3 cents per kilowatt hour.²⁰ The price increases would have amounted to an increase in direct annual energy costs of less than \$100 per household.²¹ However, the total increase in the annual cost of all goods and services would have been more than \$200 per household.²² The Btu tax was expected to raise \$22 billion in 1998, when it would have been fully implemented.²³ Over the five-year period between 1994 and 1998, the Btu tax was expected to raise \$70 billion.

As previously noted, the Btu tax was proposed to raise revenue to close the deficit and to serve environmental and national security purposes. The Btu tax was considered more politically feasible than a

12. *Id.*

13. J. Andrew Hoerner & Frank Muller, *The Impact of a Broad-Based Energy Tax on the Competitiveness of U.S. Industry*, 59 TAX NOTES 1663, 1664 (1993).

14. Janet E. Milne, *Carbon Taxes in the United States: The Context for the Future*, 10 VT. J. ENVTL. L. 1, 7 (2008).

15. See STAFF OF THE JOINT COMM. ON TAXATION, *supra* note 11.

16. *Id.*

17. *Id.*

18. *Id.*

19. Milne, *supra* note 14, at 13.

20. See CONG. BUDGET OFFICE, *supra* note 9. It is ironic given the current debate on climate change legislation that the CBO stated in its analysis that “if it were feasible, it would be better to tax the pollution itself instead of the fuel. The President’s proposal would reduce emissions of carbon dioxide less than a carbon content or a flat rate Btu tax [...]”.

21. *Id.*

22. *Id.*

23. STAFF OF THE JOINT COMM. ON TAXATION, 103D CONG., ESTIMATED BUDGET EFFECTS OF THE ADMINISTRATION’S REVENUE PROPOSALS CONTAINED IN THE FISCAL YEAR 1994 BUDGET, JCX-2-93 (1993).

carbon tax, because it was not expected to anger the members of coal-rich states such as West Virginia, Pennsylvania, and Illinois.²⁴ President Clinton stated that the tax “would cost American families with incomes under \$30,000 nothing”²⁵ due in part to the proposed increase in the earned income tax credit, food stamp programs, home energy assistance, and home weatherization programs for low-income taxpayers.²⁶

B. The Legislative Train-Wreck

The Btu tax proposal did not survive the legislative process. Although the proposal narrowly survived the House by a vote of 219 to 213, with 38 Democrats and all Republicans voting against it,²⁷ the Btu proposal met its demise in the Senate. By the time the proposal reached the Senate, a significant number of exemptions to the tax had made their way into the proposal as originally advanced by President Clinton, turning it into a mere skeleton of its former self. No fewer than thirteen exemptions to the tax had been added to the original proposal when the administration released a modified version of its original Btu tax.²⁸ Some of the items exempted from the imposition of the tax included nonfuel products such as asphalt, lubricants, and waxes, coal used in the production of synthetic natural gas, coal seam methane from operating mines, natural gas used in enhanced oil recovery for heavy oil, and ethanol.²⁹ Other modifications to the original proposal included an exemption for home heating fuel from the supplemental rate, the shift of the tax downstream to the refiners and suppliers of the refined products, and exemptions related to the production of feedstock.³⁰ Although the House Ways and Means Committee rejected the exemption for ethanol,³¹ the Administration’s willingness to make

24. Martin A. Sullivan, *Gas Tax Politics, Part I*, 120 TAX NOTES 1331, 1337 (2008). See also Dawn Erlandson, *The Btu Tax Experience: What Happened and Why it Happened*, 12 PACE ENVTL. L. REV. 173, 175 (1994).

25. Clinton, *supra* note 7.

26. Milne, *supra* note 14, at 15.

27. HOUSE NARROWLY PASSES CLINTON RECONCILIATION PACKAGE, FEDERAL TAX DAY, 93 TAX DAY Item # C.1, May 28, 1993 (CCH).

28. TREASURY PROVIDES DETAILS OF ENERGY TAX PROPOSAL, FEDERAL TAX DAY, 93 TAX DAY Item #T.1, Apr. 2, 1993 (CCH).

29. *Id.*

30. *Id.*

31. Hoerner, *supra* note 13, at 1665 (noting that ethanol production is so energy intensive such that it is unclear if any net non-fossil energy is produced when ethanol is manufactured).

revisions to the proposal in exchange for votes was a miscalculation that emboldened the opposition.³²

Even before the vote in the House, the Btu tax was subject to criticism from many different ideological groups. Hydropower, in particular, came under fire. Pursuant to the terms of the proposal, hydropower was subject to the Btu tax based on the rate applicable to fossil fuels, rather than the Btu content of the power generated. To illustrate, one kilowatt hour (kWh) of hydropower has a maximum Btu content of 3,410 Btus.³³ However, because hydropower was to be taxed at the fossil fuel rate, each kWh produced would be taxed as though it had generated 10,000 to 12,000 Btus, roughly three times the actual amount of heat content produced by hydropower.³⁴ Although this discrepancy in the application of the tax seemed unreasonable to some, others argued that it was appropriate for policy reasons to tax hydropower at the fossil fuel rate because of the harmful effects hydropower imposes on the environment—such as declines in fisheries, species diversity, riparian habitat, and water quality.³⁵ A variety of other industry groups emerged to fight the Btu tax, claiming that the tax would increase the cost of producing energy, hurt competition, and reduce jobs.³⁶ For example, the National Association of Manufacturers formed the Affordable Energy Alliance, which included over nine hundred businesses and groups, to oppose the tax.³⁷ The Independent Petroleum Association declined to join the Alliance, and instead pushed for the movement of the collection point downstream to the refiners and distributors.³⁸ However, the Btu tax did find some unlikely supporters in major automotive companies such as Ford, General Motors, and Chrysler, as they hoped that the implementation of the Btu tax would avoid the increase of fuel economy standards.³⁹

Feedstock exemptions from taxation or climate change legislation may typically be justified on environmental grounds, because the physical components of fuel that are incorporated into the final product are not released into the environment.⁴⁰ However, some of the exemptions for

32. Milne, *supra* note 14, at 13. *See also* Erlandson, *supra* note 24, at 177.

33. Romano L. Mazzoli, *Mazzoli Constituent Criticizes Btu Tax's Impact on Hydropower*, 93 TAX NOTES TODAY 153-21 (1993). *See also* Erlandson, *supra* note 24, at 178.

34. *Id.*

35. Daniel A. Lashof, *The Btu Tax: A Revenue Source That Fights Pollution*, 59 TAX NOTES 1271, 1273 (1993).

36. Erlandson, *supra* note 24, at 179.

37. Elizabeth Garrett, *Harnessing Politics: The Dynamics of Offset Requirements in the Tax Legislative Process*, 65 U. CHI. L. REV. 501, 541 (1998).

38. *Id.*

39. Milne, *supra* note 14, at 18.

40. Hoerner, *supra* note 13, at 1678.

feedstock from the Btu tax carried no environmental justification.⁴¹ However, industry argued that the fuel would be used for a nonfuel purpose and consequently should be exempted as a feedstock. This is particularly true of coal used in the steel industry, where the coal is used to drive chemical reactions, but only a small percentage of the coal is actually incorporated into the steel.⁴²

In addition to the exemptions incorporated into the Btu tax proposal for the non-policy reasons set forth above, the modified Btu proposal shifted the collection point downstream from the wellhead and mine-mouth to the electric utility, local distribution company, or end-user depending on the type of resource. Collection of the tax upstream would have ensured that the tax could be collected easily, but also would have ensured that all fuels would be taxed, including oil consumed in the field and refineries during the production of the refined products.⁴³ The movement of the collection point downstream would have undoubtedly increased the cost of compliance. No study was conducted to estimate how much it would have cost the taxpayer to comply. However, some scholars claimed that the Btu tax had the potential to cost the government between \$1 to \$2 billion per year, easily dwarfing the cost of the mandatory price control program imposed on the oil industry from 1971 to 1980.⁴⁴

Despite having passed the House, the Btu tax was met with resistance in the Senate. The Democrats only held a slim majority on the Senate Finance Committee, and industry opposition targeted Senators from oil producing states.⁴⁵ The opposition found a friend in Senator David Boren of Oklahoma.⁴⁶ It was estimated that the Btu tax would cost 11,000 jobs or 1 percent of Oklahoma's work force.⁴⁷ In breaking ranks, Boren joined with Senator John Danforth of Missouri and put forth an

41. *Id.*

42. Lashof, *supra* note 35. *See also* Hoerner, *supra* note 38, at 1678 (noting in the case of steel, "coke is used as a chemical reagent to reduce iron ore to obtain elemental iron"). Hoerner also cites aluminum as a similar example.

43. Hoerner, *supra* note 13, at 1664. *See also* Lashof, *supra* note 35, at 1273.

44. Philip K. Verleger, Jr., *The Btu Tax: Bad Tax Policy, Terrible Economic Policy, Worse Environmental Policy, and Even Worse Energy Policy*, 59 TAX NOTES 1691, 1693 (1993).

45. Sullivan, *supra* note 24.

46. Erlandson, *supra* note 24, at 181.

47. John Shanahan, *Heritage Foundation Blasts Energy Tax*, 93 TAX NOTES INT'L 109-16 (1993).

alternative proposal for reducing the deficit.⁴⁸ In the end, the Senate Finance Committee struck down the Btu tax and agreed on a 4.3 cent per gallon increase in the gasoline tax, though this too was met with resistance by some senators who claimed that it would hurt rural states such as Montana, Arkansas, North Dakota, and Wyoming more than other states.⁴⁹

Overall, although the Btu tax proposal initially introduced by the Clinton Administration would have reduced both the deficit and pollution, the acquiescence of the Administration to various modifications to the proposal, especially those to include the various exemptions to the Btu tax outlined above, caused the proposal to be defeated in the Senate due to opposition from various industries.

III. APPLYING LESSONS FROM THE BTU DEBACLE TO CURRENT CLIMATE CHANGE ISSUES

Now that climate change legislation has been put back on the table, what lessons can we take away from the Btu tax proposal? First, and perhaps most importantly, there must be a singular purpose for the legislation. Second, any tax imposed by the legislation must be collected in the most efficient manner possible.

The Btu tax had two primary goals: deficit reduction and pollution reduction. However, these goals created different camps of supporters and opponents, and with each modification to the original proposal, the grumblings from the various camps grew larger.⁵⁰ If the true purpose of the legislation were deficit reduction, it would have been better to declare it as such when it was first introduced, much like the imposition of the first federal gas tax. However, if the Btu tax were to truly serve an environmental purpose, greater attention would have been paid to determine the appropriate tax rate.⁵¹

Use of the revenue from the Btu tax for deficit reduction purposes neglected the overall effect of the tax, which would have been an increase in the overall cost of commodities and a decrease in the real after-tax wage.⁵² Although the Clinton proposal featured an increase in the earned income tax credit and other funding for low-income families, the revenue from the Btu tax was not specifically dedicated to such

48. Barbara Kirchheimer & Rita L. Zeidner, *Btu Tax in Jeopardy After Key Senate Democrats Defect*, 90 TAX NOTES TODAY 109-1 (1993).

49. Sen. Max Baucus, *Baucus Attacks Energy Tax Policy*, 93 TAX NOTES TODAY 144-80 (1993).

50. See generally Erlandson, *supra* note 24, at 182.

51. Milne, *supra* note 14, at 14.

52. Lawrence H. Goulder, *Energy Taxes: Traditional Efficiency Effects and Environmental Implications* 6 (Nat'l Bureau of Econ. Research, Working Paper No. 4582, 1993).

relief. However, because the proposal included new revenue from other sources, this “allowed the Administration to argue that it was protecting low income households.”⁵³ Many proponents of a tax on energy believe that such a tax should be revenue-neutral while others believe that such taxes should partially be dedicated to the environmental problem.⁵⁴

However, the use of the Btu tax to benefit the environment is also somewhat misleading, as a Btu tax is not considered to be a Pigouvian⁵⁵ tax, because it does not attempt to tax market activity that would otherwise generate negative externalities.⁵⁶ According to the Congressional Budget Office, the Btu tax would have only had a slight positive environmental impact.⁵⁷ If the Clinton Administration truly desired to benefit the environment through the imposition of the Btu tax, it would have been unwilling to accept many of the proposed exemptions to the application of the tax. In that scenario, the Administration might have been better off had it proposed a carbon tax, which would have reduced emissions of carbon dioxide more than the proposed Btu tax.⁵⁸

As noted above, the second lesson that may be gleaned from the failure of the Btu tax proposal is that tax collection should occur at its most efficient point. Most would consider this to be upstream in the consumption chain, where collection and monitoring costs can be minimized and maximum coverage will be ensured.⁵⁹ The Btu tax, as originally proposed, was to be collected upstream. However, as with the numerous exemptions that were granted, the collection point became negotiable as well.⁶⁰ This is evidenced by the fact that the collection point for natural gas, coal, and electricity moved downstream, with the responsibility for collection falling upon the various points downstream such as the electric utility, local distribution company, or end-user depending on the type of resource.⁶¹ This move upset environmental

53. Milne, *supra* note 14, at 16.

54. *Id.*

55. A Pigouvian tax is a tax levied on a market activity, which if unregulated, generates negative externalities. If the tax is equal to the negative externality of the market activity, it is thought to correct the market outcome back to efficiency.

56. Roberta Mann, *The Case for the Carbon Tax: How to Overcome Politics and Find Our Green Destiny*, 39 ENVTL. L. REP. 10,118, 10,124 (2009).

57. See CONG. BUDGET OFFICE, *supra* note 9.

58. *Id.*

59. Gilbert E. Metcalf & David Weisbach, *The Design of a Carbon Tax*, 33 HARV. ENVTL. L. REV. 499, 523 (2009).

60. Milne, *supra* note 14, at 13.

61. See TAX DAY, *supra* note 28. See also Milne, *supra* note 14, at 13.

groups who argued for more upstream or midstream collection to encourage a shift towards cleaner energy.⁶²

Although the Btu tax was defeated in the Senate and was thus never enacted, the negotiations surrounding the Clinton Administration's proposal and the failings of the proposal are invaluable, as they may prevent the proponents of current climate change legislation from making the same errors in judgment. First, it is imperative that current climate change legislation only have environmental benefits as its goal. Second, the legislation must require that any tax or funds payable pursuant to the legislation be collected at the most efficient point, thus reducing implementation costs and increasing the monetary benefit of the legislation to the government. The only question that truly remains is whether a carbon tax or a cap and trade system will best meet these two criteria.

IV. THE GREAT DEBATE: CAP & TRADE OR CARBON TAX

An ongoing debate has centered around whether to implement a cap and trade regime or a carbon tax to adequately address climate change. There are supporters and detractors on both sides.⁶³ The goal of this article is to discuss briefly the trendy popularity of a cap and trade system and the merits of a carbon tax, explain the political climate within which these two proposals are being advanced, and examine an alternative proposal that may be the best and yet least recognized proposal currently before the U.S. Senate.

A. Cap and Trade

Much like a fashion trend, cap and trade is currently in vogue. However, trends fade, and so too may interest in cap and trade. The fascination with cap and trade in the U.S. stems from the global regimes already in place in Europe and the ability to integrate a cap and trade system in the U.S. with a global system already in existence. Just as the imposition of the United States' form of democracy in other nations is not necessarily successful, the implementation of a cap and trade system in the U.S. may not be appropriate, even though such a system has proven beneficial in Europe.

Recent cap and trade proposals are exceedingly complex; the one that immediately comes to mind is the Waxman-Markey bill (HR 2454). At 1,428 pages, the bill is long and complex. The Waxman-Markey bill has

62. Milne, *supra* note 14, at 13–14.

63. This debate has been the subject of numerous scholarly articles and need not be rehashed here.

been called the energy and climate policy equivalent of Sarbanes Oxley, since the bill would create a large bureaucratic structure and impose substantial costs on the economy.⁶⁴ A competing Senate bill is the Kerry-Lieberman bill, which is 987 pages, and does not truly simplify the creation of a cap and trade system within the United States, relative to the Waxman-Markey bill. Thus, a cap and trade system would inherently violate at least one the lessons learned from the Btu tax, namely, simplicity of collection and corresponding reduction of administrative costs.

Therefore, if the unsuitability of the cap and trade system for the United States is accepted, the leading alternative for climate change legislation would be the carbon tax. What then are the benefits of a carbon tax?

B. Carbon Tax

1. Simplicity

A carbon tax is simple. A tax rate is set at \$X per ton of carbon emitted from the dominant sources of CO₂ in the economy, namely coal, oil, and natural gas.⁶⁵ The tax can be imposed upstream and credits can be allowed for carbon sequestration projects and other ventures that reduce greenhouse gas emissions.⁶⁶ Moreover, implementation of a carbon tax is straightforward,⁶⁷ especially in comparison with a cap and trade system, since it would utilize an existing administrative structure, the IRS, to collect the tax.⁶⁸

2. Revenue

A carbon tax would generate a significant amount of revenue that could then be used to offset the regressive nature of the tax and encourage the research and development of clean energy technologies. According to

64. Steven F. Hayward & Kenneth P. Green, *Waxman-Markey: An Exercise in Unreality*, American Enterprise Institute for Public Policy Research, No. 3, at 2 July 2009.

65. Reuven S. Avi-Yonah & David M. Uhlmann, *Combating Global Climate Change: Why a Carbon Tax is a Better Response to Global Warming Than Cap and Trade* 39 (Univ. of Mich. Law School, Working Paper No. 117, 2008).

66. *Id.*

67. A more recent carbon tax proposal is a mere 17 pages long.

68. *Price Volatility in Climate Change Legislation: Hearing Before the Committee on Ways and Means U.S. House of Representatives* (2009) (statement of Prof. Gilbert E. Metcalf).

the Congressional Research Service, recent carbon tax proposals from the 110th Congress would have generated between \$69 billion and \$126 billion in 2015.⁶⁹ At the upper range, that is almost fifty percent of the amount of revenues received from corporate income taxes for the 2005 fiscal year.

A cap and trade system, may, in theory, provide similar levels of revenue. However, given the experience in Europe under the EU Emissions Trading System (ETS) and the provisions of the Waxman-Markey bill, many of the initial allowances would be provided for free, thus generating substantially less revenue to combat the regressive effects of the system, support research and development, and encourage carbon sequestration activities.

3. *Cost Certainty*

A carbon tax ensures that the cost of producing carbon is certain. Simply stated, the cost of the tax is equal to the amount of the tax and the incidence of the tax.⁷⁰ The cost is dictated by the tax rate and thus enables businesses to plan ahead and include the imposition of the tax in their cost projections.⁷¹ Under a cap and trade system, however, the cost of carbon emissions is necessarily volatile and thus discourages businesses from investment, as they have less reliable cost information available with which to plan for capital improvements.⁷² Issues in price volatility in a cap and trade system are not new. The EU ETS has demonstrated wide swings in price. In April 2006, the price of CO₂ permits dropped when it was announced that the amount of permits allocated in Phase I were overly generous.⁷³ Futures prices dropped from €32.90 on April 20th to €18.90 on May 3rd.⁷⁴ More recently, as a result of the global economic downturn, the price per permit fell to €11.63 in January 2009 and by February 2009 had sunk to €8.20.⁷⁵ The U.S. has not been immune to such price volatility. Under a limited cap and trade system

69. JONATHAN L. RAMSEUR & LARRY PARKER, CONG. RESEARCH SERVICE, CARBON TAX AND GREENHOUSE GAS CONTROL: OPTIONS AND CONSIDERATIONS FOR CONGRESS 37 (2009).

70. Avi-Yonah, *supra* note 65, at 43–44.

71. *Id.*

72. Ramseur, *supra* note 69, at 15.

73. Metcalf, *supra* note 59, at 3. However, as Ramseur, *supra*, note 69, points out, the price volatility during the EU Phase I period (2005–2007) may not be an appropriate comparison as the volatility was related to program design issues.

74. *Id.*

75. James Kanter, *Carbon Prices Tumble as Global Downturn Bites*, N.Y. TIMES, Jan. 21, 2009, (Green Blog), available at <http://green.blogs.nytimes.com/2009/01/21/carbon-prices-tumble-as-global-downturn-bites/>. See also the European Climate Exchange for historical price data, available at <http://www.ecx.eu/EUA-Futures>.

for the California Regional Clean Air Incentives Market (RECLAIM), prices skyrocketed from around \$5,000 per ton of NO_x to almost \$45,000 per ton in 2000.⁷⁶ The imposition of a carbon tax system would avoid these extreme changes in the cost of carbon emissions, and thus would provide a much more stable environment for the investment of capital in business.

4. Transparency

Though a carbon tax may become more complex if credits against the tax are available and exemptions are permitted, such complexity may pale in comparison to a cap and trade system, in which there will necessarily be many moving parts, some of which may be included to improve efficiency and control price volatility.⁷⁷ In a cap and trade system, allowances may be treated as commodities, thus encouraging rent-seeking behavior. However, under a carbon tax, rent-seeking⁷⁸ behavior would be minimized, because industry would lack the same profit potential from such behavior, due to an inability to commoditize any credit or exemption available with respect to the carbon tax.⁷⁹ Thus, a cap and trade system would not be as transparent as a carbon tax system due to its complexity, thus creating opportunities for gamesmanship and fraud.⁸⁰

Questions of fraud have surrounded the EU ETS. According to the European law enforcement agency, Europol, tax fraud associated with trading of allowances cost over \$6.5 million over an 18-month period.⁸¹ Under this particular scheme, the perpetrators acquired the allowances without paying the value added tax (VAT) and then resold the permits with the VAT included, only to disappear before remitting the tax to the

76. Metcalf, *supra* note 68 at 3. See also Tietenberg, *infra* note 78, at 381, where it is noted that the dramatic price increase triggered a safety valve mechanism which continued to place pressure on the covered entities to reduce emissions without “straining the system beyond its tolerance limits.”

77. Ramseur, *supra* note 74, at 16.

78. Rent seeking is defined as “the use of resources in lobbying and other activities directed at securing protective legislation.” If successful, such activity increases “the net benefits going to the special interest group, but it will also frequently lower net benefits to society as a whole.” See Tom Tietenberg, *Environmental and Natural Resource Economics*, ADDISON WESLEY (6th ed. 2003), at 78.

79. Mann, *supra* note 56, at 10,123.

80. Ramseur, *supra* note 69, at 16. See also Mann, *supra* note 56, at 10,123.

81. Knowledge@Wharton, *Combating Complexities of Carbon Fraud*, FORBES, June 16, 2010, available at http://www.forbes.com/2010/06/16/canp-and-trade-fraud-entrepreneurs-technology-wharton_print.html.

government.⁸² Even more disturbing, according to Europol, in some countries upwards of 90% of total trading volume was a result of fraudulent activity.⁸³ In early 2010, the EU ETS was the subject of an e-mail phishing scam through which the perpetrators acquired access codes for individual accounts on national registries and subsequently sold the permits through accounts registered in Denmark and Great Britain.⁸⁴ Even the limited RECLAIM market in Southern California was not immune to fraudulent activity. Anne Masters Sholtz, a former Caltech economist who helped design the RECLAIM system, defrauded various creditors out of almost \$80 million.⁸⁵

The creation of permits or allowances within a cap and trade system results in the creation of yet another financial instrument that may be the subject of manipulation and fraud, similar to sub-prime mortgages, collateralized debt-obligations, and credit default swaps.⁸⁶ The possibility of fraud and manipulation of the allowance market are the potential uncertainties faced under a cap and trade system. Alternatively, under a carbon tax, none of this uncertainty would exist. Those entities upon which a carbon tax would be imposed could be required to register with the IRS, similar to the registration required for entities obligated to pay the fuels tax.⁸⁷

5. *Political Environment for a Carbon Tax*

Is this much ado about nothing? The prevailing belief is that a carbon tax is not politically feasible simply because it contains the word “tax.”⁸⁸ The mid-term elections will be held this year, so politicians are understandably shying away from the enactment of any legislation that could be characterized as a “tax increase.” Similarly, while cap and trade appeared to be a popular solution for combating climate change in 2009, it has effectively been branded as “cap and tax” by its opponents.⁸⁹ In

82. James Kanter, *Fraud Besets E.U. Carbon Trade System*, N.Y. TIMES, Feb. 8, 2010, available at <http://www.nytimes.com/2010/02/08/business/energyand-environment/08green.html>.

83. Knowledge@Wharton, *supra* note 81.

84. Kanter, *supra* note 82.

85. *Ex-Caltech Economist Guilty in Fraud Case*, L.A. TIMES, Apr. 27, 2005, at B4.

86. See also Kevin Ulrich, *Breaking the Smog Bank*, PASADENA WKLY., May 14, 2009, available at http://www.pasadenaweekly.com/cms/story/detail/breaking_the_smog_bank/7239/.

87. Metcalf, *supra* note 68, at 6.

88. I.R.C. § 4101 (West 2010).

89. Ramseur, *supra* note 69, at 20.

90. John M. Broder, *Cap and Trade Loses Its Standing as Energy Policy of Choice*, N.Y. TIMES, Mar. 25, 2010, available at <http://www.nytimes.com/2010/03/26/science/earth/26climate.html>.

reality, cap and trade would impose costs on the economy and those costs would likely be borne by the ultimate consumer. In essence, a carbon tax system and a cap and trade system may have similar effects, in that the ultimate cost would be passed on to the consumer. In this political climate, although the cap and trade system would be infinitely more complex, though more widely discussed, it is unlikely that even the simpler carbon tax will be passed by Congress.

V. IS CAP & DIVIDEND THE ANSWER?

The political unwillingness to enact a carbon tax simply because it is a “tax” may be real or perceived. Be that as it may, politics is based on perception and a “tax” may be a hard pill to swallow for many members of Congress given the current political climate. Although a carbon tax would be preferable if the political climate could sustain it, it may be possible to design a cap and trade system that is simple and achieves an incremental reduction in greenhouse gases. The Carbon Limits and Energy for America’s Renewal (CLEAR) Act (S. 2877) sponsored by Senator Maria Cantwell of Washington and Senator Susan Collins of Maine attempts to do just that.

The CLEAR Act is a thirty-nine page piece of legislation which has apparently been described by President Obama as “very elegant.”⁹⁰ Instead of proposing a cap and trade system, the Act proposes a cap and dividend system. The CLEAR Act targets a reduction in greenhouse gases, but only to the extent that they constitute carbon dioxide emissions from what the Act calls “fossil carbon.” Fossil carbon includes carbon in the form of a fossil fuel such as coal, natural gas, crude oil and the carbon content of imported refined fuel products. The Act sets forth the following timeline for the reduction of greenhouse gas emissions: (1) in 2020, 20% below 2005 levels; (2) in 2025, 30% below 2005 levels; (3) in 2030, 32% below 2005 levels; and (4) in 2050, 83% below 2005 levels.

The limitations will apply upstream to the “first seller” at the wellhead, mine entrance, or the port of entry. Under the CLEAR Act, all carbon shares (allowances) will be auctioned off with an initial floor price of \$7 and ceiling price of \$21 beginning in 2012. The floor price and ceiling price will increase each year by the rate of inflation, plus the rate of capital investment, and increased by 0.5 percent. In the event the first

90. *Id.*

seller cannot submit the appropriate number of carbon shares to the appropriate governmental authority, the first seller is subject to a penalty in the amount of the number of shares the first seller failed to remit, multiplied by five times the auction price on the date closest to the non-compliance date. The Act includes a safety valve provision,⁹¹ such that if the “safety valve price” is met in any one auction, the number of available carbon shares may be increased to ensure all legal bids at the safety valve price can be accommodated.

To combat the regressive impact the cap would impose on society, a Carbon Refund Trust Fund would be set up, to which 75% of the auction proceeds will be transferred. The proceeds would then be distributed to all legal residents of the U.S. as a nontaxable “energy security dividend.” A separate fund, the Clean Energy Reinvestment Trust Fund (CERT Fund) would also be set up to which the remaining 25% of auction proceeds would be transferred. In addition, all penalties, safety valve revenues and border fees would be transferred to the CERT Fund. Expenditures from the CERT Fund would go towards relief for exporters, region specific transition assistance for those regions economically dislocated as a result of the cap, support training of workers for the green economy, the provision of financial assistance to low income families, and funding for clean energy research, development, and deployment. In addition, safety valve revenues would be used solely for offset-related projects, as offsets are not permitted for compliance purposes of the cap.

The CLEAR Act is a model of simplicity, but its likelihood of passage is in doubt, as the trade winds favor complex and onerous legislation. The Act attempts to combat the regressive nature of the cap, stimulates investment in clean technology, and limits the potential for fraud. Because the initial floor price is low, it is unlikely to cause immediate change, though it is anticipated to ease the economy at large into a carbon constrained economy without a shock. While the CLEAR Act sets forth a general framework for the cap and dividend system, if it were passed, many of the details would be the subject of a voluminous set of regulations. It is currently unclear whether certain programs designed to stimulate investment in clean energy technology would be administered through a direct government grant or through the Internal Revenue Code as a credit, deduction or refundable credit, although this issue too may be addressed in regulations.

91. See Metcalf, *supra* note 68, at 4 (where the author notes that a safety valve provision “allows firms to purchase an unlimited number of permits at a set price and thus sets a ceiling on the price of permits. If the market price for permits is below the safety valve price, then firms will simply purchase permits on the open market. Once permit prices reach the value of the safety valve, firms will purchase any needed permits from the government.”).

VI. CONCLUSION

The Btu tax proposal and its subsequent failure provide context and lessons for the current debate on climate change—namely, to have a singular purpose, make it revenue neutral, and impose the policy at the most efficient point of collection. While legislators continue to debate the appropriate mechanism to combat climate change, our society is moving closer to the tipping point at which the effects of climate change will be irreversible. The environmental benefits of each of a carbon tax, cap and trade system, or cap and dividend system are measurable, though they are more certain under a cap and trade or cap and dividend system. However, a cap and trade system, such as the system recently proposed in Congress, would contain complexities that may lead to inefficient administration, and worse yet, fraud. While it may not be politically feasible to enact a carbon tax, it would be less complex, provide revenue, provide cost certainty, and would be more transparent than the alternatives.

In lieu of a carbon tax, the CLEAR Act provides the best alternative to the Waxman-Markey and Kerry-Lieberman cap and trade bills. Although it is not a tax per se, the CLEAR Act sets forth a simple framework that attempts to take into consideration the lessons of the Btu tax. It is simple, largely revenue neutral, has a singular purpose, and would be imposed upstream. The CLEAR Act is less complex than the Waxman-Markey bill or the proposed Kerry-Lieberman bill; however, a portion of revenue from the imposition of the cap will be siphoned off for the administration of the Act. There is no doubt that with a carbon tax, there would be an administrative burden on both the IRS and the taxpayer, but such burden could be minimized. The CLEAR Act is a viable alternative and could ease the overall economy into a culture of carbon constraint. The fact that it only caps carbon dioxide emissions initially is irrelevant, as other emissions can be capped over time, assuming the system put into place under the CLEAR Act is successful with respect to carbon dioxide emissions. In the absence of a carbon tax, the CLEAR Act may be the best alternative to effect meaningful climate change. It is unfortunate that the CLEAR Act has neither received the recognition nor the consideration that it deserves.